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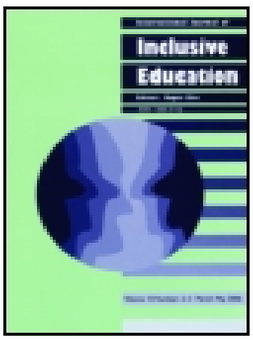

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Balancing inclusive design, adjustments and personal agency: progressive mutual accommodations and the experiences of university students with vision impairment in the United Kingdom

Rachel Hewett[a], Graeme Douglas[a], Michael McLinden[a] and Sue Keil[b]

[a]Vision Impairment Centre for Teaching and Research (VICTAR), Department of Disability, Inclusion and Special Needs (DISN), School of Education, University of Birmingham, Birmingham, UK; [b]Visual Impairment Education Workforce (VIEW), Birmingham, UK

ABSTRACT

This paper proposes a framework of support for reducing barriers to curriculum access for students with disabilities in higher education (HE), by drawing upon findings from a unique longitudinal qualitative study. The 'Longitudinal Transitions Study' commenced in 2010 and followed the transition experiences of a group of 80 young people since they left compulsory education, 32 of whom went into HE. Interviews were conducted with participants at several key stages of their time in HE and supplemented by focused case study work with seven of the participants. The analysis provides original examination of how appropriate balance can be achieved between broad inclusive practice and individual adjustments meeting specific needs. Key curriculum access issues identified in the study are outlined with examples of how these were overcome through 'inclusive practice', 'individual adjustments' and 'individual agency' of the student. Drawing upon a Bioecological Model of Inclusive HE, a framework of support is proposed for achieving appropriate balance through the notion of progressive and mutual accommodations to facilitate learning environments which enable students with disabilities to become independent learners. The paper has broader significance for educators and researchers concerned with promoting inclusive teaching in HE and ensuring equality of opportunity for all students.

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Introduction

Students with disabilities constitute an increasing proportion of the total student population in higher education (HE) within the United Kingdom (HESA 2018), although recent research highlights barriers encountered in their learning and limitations to inclusive practice (e.g. Riddell, Tinklin, and Wilson 2004; Bishop and Rhind 2011; Hewett et al. 2017; and Seale

CONTACT Rachel Hewett r.g.hewett@bham.ac.uk Vision Impairment Centre for Teaching and Research (VICTAR), Department of Disability, Inclusion and Special Needs (DISN), School of Education, University of Birmingham, Birmingham B15 2TT, UK

et al. 2015). The UK Equality Act (HM Government 2010) is central to the support system for students with disabilities in the UK, requiring providers to make 'reasonable adjustments' (including *anticipatory* adjustments) to remove barriers and ensure no student is put at a disadvantage. Similar legislation exists in other countries, for example the US Americans with Disabilities Act (Yssel, Pak, and Beilke 2016). This legislation has a primary focus on the very important role of institutions in facilitating inclusive educational experiences for students with disabilities. Nevertheless, an unintended consequence of this focus can be neglecting to recognise the role of the individual learner in helping to shape his or her experiences within HE. A notable example is a recent model outlined by the UK government (HM Government 2017) which guides HE institutions (HEIs) on how best to support students with disabilities but makes no reference to the role of the individual learner.

This is of particular significance as research evidence on the experiences of students with disabilities in HE consistently demonstrates the important contribution of the learner to his or her experience. As an example, Morina (2017) emphasises how significant the transition into HE is for students with disabilities, when compared to that of their peers, noting 'the main source of difficulty in this lies in the fact that the student must often adapt to new organisational, educational and social contexts' (p. 8). Furthermore, several studies have shown that key to successful transitions for students with disabilities are a range of key skills, including self-determination, self-advocacy, problem-solving, self-management, use of assistive technology, resilience, understanding of strengths and weaknesses and study skills (Getzel and Thoma 2008; Morina 2017; Duquette 2000).

The purpose of this paper is to propose the parameters of a new framework through which to view the role of the learner with disabilities in HE. This includes how students might best be prepared to thrive in this new environment, and how best institutions might work *with* students to promote an independent learning experience, without compromising on their responsibilities to promote inclusive learning. This framework is developed through drawing upon the findings of a longitudinal study which has followed the experiences of over 30 young people with vision impairment (VI), as they transitioned into HE. The data are analysed through the lens of a bioecological model of inclusive HE, previously developed by Hewett et al. (2017) to assess how inclusive UK HEIs are for students with VI. This model built upon Bronfenbrenner's bioecological model of human development, in which a developing individual is viewed as being situated in an environment influenced by various 'systems'. Of most significance to this paper, later versions of Bronfenbrenner's model took into account the role played by the individual, particularly through the inclusion of 'proximal processes' which represent the complex series of interactions between the individual and the environment (Bronfenbrenner 2005; Rosa and Tudge 2013). By adopting this framework, it allows us not only to consider how inclusive the environment is in which the learner is situated but also to consider the role of the learner as an 'active' agent within that environment.

Inclusive HE and the role of the learner

Inclusive education recognises the significance of the broader 'social structures' which can lead to the inclusion and exclusion of some individuals from education (including HE). Those concerned with inclusive education emphasise the importance of promoting inclusive policies and social practices within these structures – e.g. accessible teaching resources, accessible physical, social and online environments, and inclusive learning and teaching

approaches. Inclusive learning and teaching are described by Hockings (2010, 1) as 'the ways in which pedagogy, curricula and assessment are designed and delivered to engage students in learning that is meaningful, relevant and accessible to all'. Morina (2017) notes that the foundation for inclusive education lies with younger children and that subsequently HE providers have found it difficult to apply its principles. Allan (2003) identifies inclusive education as a 'major challenge' to developed countries, noting two key barriers: the dominance of a 'special education paradigm' and the professionalism and understanding of teachers (176).

Significant changes occurred in England following funding reforms, which placed greater responsibility on HE providers for the support provided to disabled learners (BIS 2015) and an increasing amount of data is collected by Higher Education Statistics Agency to assess outcomes for students with disabilities. Collectively, this places a greater onus on institutions to ensure students are fully included. However, despite HEIs having a legal obligation to include students with disabilities, research evidence demonstrates that students with disabilities still face many barriers in HE, including environmental barriers, inaccessible learning material, a lack of knowledge and expertise of staff and other stakeholders, and negative attitudes of staff (Morina 2017; Fuller et al. 2004; Kendall 2016).

We argue in this paper, that it is also important to evaluate the experiences of a student with disabilities in HE in the context of his or her role as an 'independent' learner, i.e. to ensure that there is also a focus on the *personal agency* the person has developed during their life to be able to embrace inclusive practice. Personal agency is a term which is used across multiple disciplines, each with their own nuances, and as such is complex to define. Bandura (2006) states that 'to be an agent is to influence intentionally one's functioning and life circumstances' (164) while Little (2002) argues that agency 'functions as a personal resource for facing the challenges that emerge throughout development' (223), arguing that 'by explicitly examining the role of agency in development, we can identify those features of both individuals and contexts that maximally contribute to the agentic self and successful development along the life course' (237). This perspective is echoed by Evans (2002) who notes that there is a 'need to reconsider both structural influences and the sense of agency and control displayed by young people as they move into adulthood and various stages and forms of independence' (246). These views are also emphasised by researchers in VI education (e.g. Sapp and Hatlen 2010; Hewett et al. 2017) in highlighting the importance of preparing a young person with VI for new environments by promoting distinctive independence skills.

Personal agency is considered to have particular relevance to students with VI during the transition *into* HE, where, in comparison with school, there is an expectation that the student will take greater responsibility for their learning and independent living (Hewett et al. 2017). For a student with VI, this expectation raises assumptions that upon entry they will have necessary independence skills in place to, for example move around campus, access information independently and explain support requirements. In the UK, recognition is given to the role of education for enabling children and young people with VI to develop independence skills through the 'additional curriculum', and similarly in the USA through the 'expanded core curriculum' (ECC) (Douglas et al. 2011; Sapp and Hatlen 2010; McLinden et al. 2016). When discussing the ECC, Allman, Lewis, and Spungin (2014) argued that specialist educational professionals working with students with VI should do so by 'beginning with the end in mind […] focussing on the potential adult' (14–15), thus stating that when planning the curriculum, education professionals should consider the range of skills which that individual will require in adulthood.

Overview of bioecological model of inclusive HE

The model proposed by Hewett et al. (2017) can be summarised as follows. Firstly, the *microsystem* incorporates 'the complexity of relations between the developing person and the environment in an immediate setting containing the person' (Bronfenbrenner 1979, 515). This could include curriculum, teaching staff, peers and library facilities. The *mesosystem* comprises of 'the interrelations amongst major settings containing the developing person at a particular point in his or her life' (Bronfenbrenner 1979, 515) and incorporates 'the linkages and processes taking place between two or more settings containing the developing person' (Bronfenbrenner 2005, 148). For example, the interaction between disability specialist staff and department welfare tutors. The *exosystem* is situated around the mesosystem and encompasses the linkages and processes taking place within the immediate environment which are removed from the developing person, but nevertheless influence their experience (Bronfenbrenner 2005, 148). This includes policies for developing inclusion and the amount of resource allocated for doing so. The *macrosystem* acknowledges 'the contribution of the broader social context' (Bronfenbrenner 2005, 149–150). Examples include government policies towards supporting students with disabilities. In later versions of his theory (e.g. Bronfenbrenner 2005), Bronfenbrenner makes reference to the *chronosystem* to incorporate a time element to individual development and the ongoing development of *progressive mutual accommodations* through a partnership between learner and the environment. The chronosystem captures progress in the development of knowledge, understanding and skills over time, including areas of the additional curriculum or ECC.

The bioecological model of inclusive HE serves as a valuable model through which to highlight particular influences on the experiences of learners by illustrating the complexity of the interrelated support systems for students with disabilities and the important role the learner has as an agent within this system. It is these complexities which the paper seeks to address by using the model developed by Hewett et al. (2017) to investigate how HE providers might find an appropriate balance of support. In essence, such a balanced approach includes working towards the removal of barriers through *inclusive practices*, while addressing *individual needs* of learners through reasonable adjustments where required, crucially, facilitated by the individual learner drawing upon the skills and experiences they have developed. This framework of support therefore emphasises progressive and mutual accommodations between learner and institution through a given learning pathway. The paper does this by using data collected through a unique longitudinal qualitative study which has been tracking the transition experiences of a group of young people with VI.

We begin the paper by outlining a summary of the study. Drawing on select findings, various examples of curriculum access are outlined along with illustrations of how these were overcome through (i) inclusive practice, (ii) individual adjustments, and (iii) the personal agency and adjustments of the student. We discuss these findings in the context of broader inclusive practice in HE and propose a new framework of support for students with VI that outlines how an appropriate balance can be achieved. With reference to the bioecological model of inclusive HE outlined above, we illustrate the particular nature of 'progressive, mutual accommodation' required in order for students with VI to participate and succeed in HE.

Longitudinal qualitative study

Background to the study

The Longitudinal Transition Study conducted by researchers at Vision Impairment Centre for Teaching and Research has been following the post-16 transition experiences of a cohort of 80 young people with VI since 2010. The research was first instigated due to concerns regarding poor employment outcomes for young people with VI (e.g. Clements, Douglas, and Pavey 2011).

Participants were recruited through local authority sensory support services across England Midlands regions and Wales. Participants (and their families) expressed consent to take part in the study by returning a signed consent form on which they confirmed that they had read and understood a project information sheet. Entry criteria for inclusion in the study were that potential participants were in school years 9 to 11 at time of recruitment (aged 14–16), that they were supported in education in relation to their VI and that they were judged by their service to fulfil the entry criteria of being able to complete a questionnaire independently. Over 80 young people consented to take part in the study, and the sample recruited was judged to form good representation of the overall population (Hewett, Douglas, and Williams 2011); although as is often the case in studies of this nature, baseline questionnaires suggest a higher proportion of the participants come from supportive families than average. The participants reflected a range of VI, ranging from requiring minimal adjustments to no light perception and studied in a range of educational settings. A summary of key characteristics of the participants is provided in Table 1. Ethical approval for the project was obtained from University of Birmingham Ethics committee.

Overview of data collected

Since 2010, data have been collected twice-yearly through semi-structured telephone interviews which were audio recorded and transcribed. Interviews have focused on both the participant's transition journeys (i.e. their experiences of moving from one setting to another) and also factors which are believed to be important for successful transitions of young people with VI (e.g. self-advocacy skills, skills to access information and mobility skills).

The progress of participants has been followed through a series of transitions including further education, HE, apprenticeships and the labour market. The data presented in this paper were collected from interviews with 32 of the participants who transitioned into HE. Case study work was also conducted with seven participants, centring around interviews with some of the key people involved in their transition into HE (e.g. family members, welfare tutors and disability specialist staff). The participants were interviewed about their experiences in HE at multiple stages including application, initial entry, and end of the first year of their studies. Their progress was also followed during the regular longitudinal interviews.

Data analysis

Following interviews, audio recordings were transcribed verbatim by the project researcher, before being entered into a pre-prepared SPSS worksheet. The data were then analysed through both basic summary statistics using SPSS and through thematic analysis (using NVivo 10) following a multi-stage process. The first three stages of this process are summarised in Hewett et al. (2017). Briefly, in Stage 1, the project researcher arranged the data into a

Table 1. Overview of participants in HE ($N = 32$)

Gender	
Male	18
Female	14
Registration type	
Sight impaired (partially sighted)	13
Severely sight impaired (blind)	11
Not registered	5
Participant does not know	3
Preferred reading format	
Standard font size (up to pt 14)	4
Large print (Pt 16–22)	15
Very large print (Pt 24+)	4
Braille/Screen-reader	9
Type of secondary school education	
Mainstream school	19
Special school	11
Both mainstream and special school	2
Type of HEI attended	
Pre-1992 institution	12
Post-1992 institution	17
Specialist institution	3

sequence of chronological events reflecting the transition journey into HE. The findings from this stage are presented in a technical report (Hewett, Keil, and Douglas 2015). Stage 2 involved the researchers collaborating to rearrange and combine codes, drawing upon two frameworks – World Health Organization's International Classification of Functioning, Disability and Health (ICF) (WHO 2001) and the Bioecological Systems Theory of Human Development (Bronfenbrenner 1979, 2005). In Stage 3, the researchers re-evaluated the data by considering the system as a whole, particularly with respect to inclusion, which led to the development of the bioecological model of inclusive HE (Hewett et al. 2017) applied in this paper. Finally, in Stage 4, the research team revisited the analysis to identify examples of balanced strategies for inclusive access to HE in terms of inclusive practice, individual adjustments, personal agency and the role of progressive mutual accommodations between learner and institution. Drawing upon findings from Stages 1 to 3, a pre-determined list of 'key curriculum access issues' was used (and later refined) to theme these different strategies. With respect to the bioecological model, this stage of the analysis focused in particular on 'proximal processes' (interactions between the learner and their environment), the personal agency of the learner as developed in the chronosystem and the role of progressive mutual accommodations. It is the findings from Stage 4 of the data analysis which are presented in this paper.

Balanced strategies for inclusive access to HE for students with vision impairment

The findings are organised under a series of seven curriculum access issues, which were identified during Stage 1 of the analysis process. This list is not intended to be exhaustive, but rather to provide illustrative examples of central components of teaching and learning in which to explore and balance the following interrelating functions:

1. Inclusive practice – i.e. how barriers had been addressed through the foundations of inclusive education;

2. Adjustments – i.e. where it was necessary for the HEI to make adjustments to meet individual needs to overcome barriers which could not be overcome through inclusive approaches;
3. Personal agency and adjustments of the learner – i.e. where the individual made their own adjustments, drawing upon (and developing) their existing skillset (reflected in the chronosystem).
4. Progressive mutual accommodations – i.e. where institution and learner collaborated to facilitate access, and how this developed over time.

Functions 1 and 2 were informed by existing models of support for students with disabilities in HE (e.g. HM Government 2017), while functions 3 and 4 were influenced by Bronfenbrenner's bioecological model and research literature (as outlined in the Introduction). Primarily, we focus on positive examples of inclusion, but also highlight barriers the young people faced and suggest ways in which they could have been overcome. Examples provided are illustrated through quotes from the participant and case study interviews. Short descriptions of these individuals are given (but suitably general to preserve anonymity).

1. Course design

Morgan and Houghton (2011) outline several principles for inclusive curriculum design. They describe these as taking 'into account students' educational, cultural and social background and experience as well as the presence of any physical or sensory impairment and their mental well-being' (5).

Positive accounts of course design came from participants whose lecturers had provided clear and considered learning objectives. For example, one participant studying a scientific course had problems with the accessibility of a piece of specialist statistics software and was not able to use it for his assignments. The software chosen was standard to the field of study and one that employers would expect students to have learned as part of their degree, hence important to use so as not to restrict other students. However, as the course was designed around learning objectives of understanding the mathematics behind the calculations being made rather than the use of the software itself, lecturer and student were able to work together to identify suitable alternative modes of learning and assessment. This was possible due to the student's ability to articulate possible adjustments including alternative software, which they had used in school.

In contrast, another student described how her lecturer felt unable to accommodate her needs in their course given it had very visual content and practical sessions, instead advised the student not to attend their lectures. No alternative was put in place such as producing tactile versions of diagrams or written descriptions.

> I just spoke to the lecturer and said 'is it worth it' and most of the time we decided that I just wouldn't bother going. (Blind student, scientific course)

It is inevitable that some courses will pose challenges for students with VI, especially when by their nature they have significant visual content. A positive approach would be for the staff and student to explore the adjustments which may be required, working with expert disability staff at the institution to identify solutions. This requires the student to be able to draw upon their knowledge of adjustments which have successfully been made for them in the past and to be able to articulate them.

2. Accessible lecture notes

Students with VI can benefit from having access to accessible lecture notes in advance of lectures. Hewett et al. (2017) report that this is becoming standard practice in many HEIs in the UK. One participant explained how he liked that this was standard practice for all students. When discussing reasonable adjustments an HEI should make, he responded:

> I think they made them when they started, which was putting the PowerPoints online before the lectures so that we could access them, and just small stuff like that … The one thing that I did like was that they did it for everyone, not just me, so I didn't feel like I was being singled out. (Partially sighted student, reads material through magnification)

While it is the HEIs' responsibility to ensure that notes are made available and in an accessible format, this inclusive practice will be ineffective if the students themselves do not have the necessary skills to be able to access this material.

> I am just annoyed that all my stuff had to go through electronically, they don't listen that I can't work electronically. It's like trying to talk to a brick wall. (Partially sighted, reads large print)

In certain situations, it was necessary to make individual adjustments to enable participants to access the lecture notes. This was particularly the case with graphs where tactile versions of diagrams were required. This often required a period of learning between student and lecturer as they worked together to ascertain how best to make content accessible, according to the student's preferences. Students made personal adjustments by obtaining lecture notes in advance of lectures, making modifications where required (such as changing the font size) and using assistive technology.

3. Delivery of teaching sessions

Lecturers can include students with VI by ensuring lecture material is accessible – i.e. that it is prepared in a format which enables the student's independent access, using assistive technology where necessary. Some participants in the study felt excluded from lectures as they relied upon the note-taker's support to help them access inaccessible parts of the lecture, such as diagrams being drawn on a board. This resulted in the student sitting beside their note-taker to receive verbal instruction during the lecture, something which they felt restricted interaction with their peers.

Some students benefited from individual adjustments made for them during their teaching sessions. For example, one lecturer gave verbal clues to help the student follow the lecture:

> He's actually altered the way that he sort of goes through things in his lectures to make it easier for me … he's kind of come up with a way of making me aware of when he changes slides, without making it aware to everyone else. (Blind student, reads material through speech software)

The student made her own adjustments by introducing herself to the lecturer and setting up a meeting to help devise this strategy. It could be argued an adjustment

which ensures that students are able to follow the flow of a lecture would benefit all, forming part of inclusive pedagogy.

Some teaching sessions involved group work. Positive accounts came from participants who felt able to explain to their peers how best to facilitate them in the group. Peers made positive adjustments by being mindful of the accessibility of specific tasks when allocating roles. A less positive account came from one participant who was unable to keep up with the pace of the group work because the material provided was not accessible and not made available in advance.

4. Facilitation to attend teaching sessions

A challenge for students with VI can be getting independently to and from lectures. Examples identified of inclusive practice to facilitate this are to provide timetables in advance (allowing sufficient time to allow for mobility sessions to be arranged) and making the environment as accessible as possible, for example with tactile paving and clear signage and good lighting.

> I have asked for a provisional timetable when it comes out, so that my mobility officer can have it and work out if I need to learn any new routes. (Blind student, long cane user)

An obvious individual adjustment is the provision of mobility support to enable the student to learn necessary routes around the institution. General inclusive practice includes restricting the amount of movement that students need to make between lectures (e.g. not scheduling consecutive lectures on opposite sides of the campus).

The receipt of mobility support relies on the student engaging with this support, and for them to have existing mobility skills to draw upon. One participant who received limited mobility support in school was restricted by his mobility skills once in HE. Despite having access to mobility support, in the second year of his degree, he felt unable to move into private accommodation with his friends, as he was not confident enough to travel independently onto campus. He also felt unable to travel back to visit his parents by using public transport. Another participant who identified herself as having strong mobility skills was frustrated as the HEI did not arrange for her mobility sessions until several weeks into the first semester. Instead of being able to go between lectures independently, she was reliant upon a sighted guide. Other students reported at first needing some sighted assistance as they learned to navigate their new environment, but over time they were able to learn the necessary routes, illustrating how the amount of support that a VI student will require is progressive.

5. Accessing reading material and assessments – coursework

Central to the concept of HE is the aspiration for the student to become an independent learner, facilitated through independent study. For students with VI, this is often problematic due to barriers in obtaining accessible copies of text, beyond the immediate control of the institution. HEIs can promote inclusive practice by providing copies of reading lists in sufficient time for alternative formats to be obtained and subscribing to accessible online journals/e-books. This can advantage all students as they have more time to access reading material to conduct preparatory reading and have more options for

accessing texts. One participant described how she learned after her first year to be organised and to request books as early as possible:

> So this year I picked my modules for the second year in March, and I got the library list for the modules and immediately asked them to get, asked them to make them immediately. (Blind student, reads material through speech software, demonstrating agency)

The study highlighted particular challenges for students reliant on electronic formats as when they sought to identify books independently, they were unable to scan through physical books in the same way as their sighted peers. This challenge was overcome through individual adjustments and the provision of 'research assistants'. However, working with a research assistant requires a considerable adjustment by the student as they learn to instruct them. One participant shared how they found it challenging at first knowing how to approach this, and how it was necessary for them to work with the research assistant to develop a suitable strategy.

Several of the participants with severe VI encountered barriers due to the apparent lack of training of support staff. For example, one participant very articulately described how she had explained to library staff that she required electronic versions of textbooks which were compatible with her screen-reader. However, when she received them, the files supplied were in inaccessible image format instead of text format.

6. Assessments – examinations

The majority of participants identified individual adjustments which were made by the HEI to enable them to sit examinations. Problems were encountered when adjustments were made ad hoc, and several participants identified occasions where they had been given incorrect room numbers or the invigilator had not been correct information about the adjustments they should receive, such as the amount of additional time.

An example of inclusive practice identified by one student was how exam access arrangements were embedded into the institution's system. For example, as part of her learning support agreement, she was due to receive extra time for assessments. This was automatically factored into online exam timetable, and when she took online assessments, the systems were designed to automatically allocate extra time. One participant had a less positive experience as instead of accessing his individual timetable; he incorrectly assumed he was in the same room as friends, having not looked at his individual timetable beforehand. A further example of an inclusive assessment process is giving *all* students the option to work electronically. This was not an option at the institutions of the 32 students we worked with. Instead, the institutions catered for individual needs, through modified papers, extra time and separate rooms and the provision of reader/scribes. When asked about how they found these adjustments, the participants spoke positively of them, highlighting that they were able to draw on their experience of working with the same types of adjustments when at school.

In order to put into place appropriate exam arrangements, HEIs looked to the student to explain their preferred access methods. One participant was very diligent in doing this, having previously faced situations where her paper was not prepared correctly.

> Yeah, I specifically made sure that they were in Word. Because I have issues in the past where I have requested stuff in Word and I have still got in PDF which I can't access and stuff. So I made a big deal about them having to be in Word, and I emailed all the people, so yeah, they were in Word! (Blind student, reads material through speech software)

7. Assessments – feedback

A number of participants reported receiving exam grades and assignment feedback through the HEIs Virtual Learning Environment (VLE). To ensure an inclusive experience, it is important to ensure feedback is accessible to all. One participant shared how her feedback was uploaded in a 'picture format' of PDF on the VLE, meaning she was unable to read this feedback using a screen-reader, and thus unable to access her marks independently.

> And what has happened now, I asked them to email me my exam results, because they get posted up on [VLE] which I can't access with a screen reader very easily. So I asked them to email it to me, obviously asked for it in Word, and they sent it to me the other day in picture PDF – again! (Blind student, reads material through speech software)

Several participants described how they and their lecturers arranged individual meetings to provide feedback specifically in relation to their VI. One common example of feedback given was not using sufficient references in their assignments. This was often attributed by the participants to the problems they faced in accessing necessary texts. This dialogue with their lecturers alerted the participants to the importance of referencing and in several cases was a catalyst to them taking the initiative to develop strategies to access more material, including making greater use of existing support.

None of the participants identified having had opportunities to provide feedback on how well the adjustments had been delivered. This proved a barrier to some participants who experienced problems but did not have the confidence to challenge this. One participant over the course of her degree described facing multiple problems with examinations; to the extent, she believed it affected her final degree classification. A tension in this situation was identified by the disability support officer at her institution who explained that due to the volume of students that they support, they rely on individuals to identify problems as they occur. Raising problems such as these is an important aspect of self-advocacy. When asked what had helped them in addressing such challenges, the principle enabler identified by the participants was being able to draw on previous experiences:

> I was taught how to stand up for myself, I was taught how to assert myself, and I was taught to some extent what my rights were and that kind of thing, particularly at the school level. So that was fine, and I guess I just figured out how to extrapolate that.

Discussion

Balancing inclusive practice, individual adjustments, agency: the role of progressive mutual accommodations

Recent reforms to the English support system for students with disabilities mean that greater responsibility has been given to HEIs to accommodate students with

disabilities. With research evidence demonstrating that there are still many barriers faced by students with disabilities in HE (e.g. Hewett et al. 2017; Morina 2017), this suggests it is necessary for HEIs to review their models of support.

A significant challenge for HEIs is how to find an appropriate balance between creating 'inclusive' learning environments which accommodate all students, recognise where it is necessary to make specific adjustments for individuals with particular needs, and work in partnership with the learner. This paper contributes to this debate by providing a discussion of key curriculum access issues in HE for students with VI. The examples provided demonstrate how participants in the study benefited from inclusive practice such as the provision of accessible material in advance of lectures and positive individual adjustments such as tactile diagrams. Underlying the accounts from the participants were examples of ways in which their pre-existing skills and knowledge had an impact upon their experiences. Examples include their ability (or lack of) to use assistive technology, get around independently, self-advocate and knowledge of possible adjustments. These examples illustrate the types of targeted skills which are developed with children and young people with VI through the additional curriculum and ECC during school, and as recognised in Bronfenbrenner's bioecological model (specifically the chronosystem), highlights the importance of developing such skills over time.

Throughout the course of the interviews, there had been a sense of acceptance from the participants that HEIs face a complex challenge in making reasonable adjustments to enable them to fully participate in HE, and an understanding that a period of learning is required by all stakeholders. This relies on the personal agency of the student, the duties of the HEI, and the willingness of both to partner together, as captured in a bioecological systems model through the notion of progressive and mutual accommodation over time.

This paper builds upon previous models of support within England (e.g. HM Government 2017) to emphasise the importance of ensuring the personal agency of the student is accounted for. It does this by highlighting a range of situations where in order for students to maximise their benefit from inclusive practice and individual adjustments, it was necessary for them to have developed a broad range of skills, including for example mobility, access technology and self-advocacy. The relationship between these factors is illustrated in Figure 1.

This framework illustrates that a balanced approach is required for students with VI in HE, to enable them to function as independent learners. In keeping with other models of support for students with disabilities in HE (HM Government 2017), it recognises the need for a balance between anticipatory adjustments provided through 'inclusive practice' alongside adjustments to meet individual needs. Significantly, in addition, it explicitly acknowledges the role of the learner in facilitating successful outcomes by drawing upon his or her personal agency. The framework also recognises the progressive nature of this support in the form of progressive mutual accommodations between institution and learner. The concept of personal agency and progressive mutual accommodations over the lifecycle of a university qualification is illustrated by the following case study.

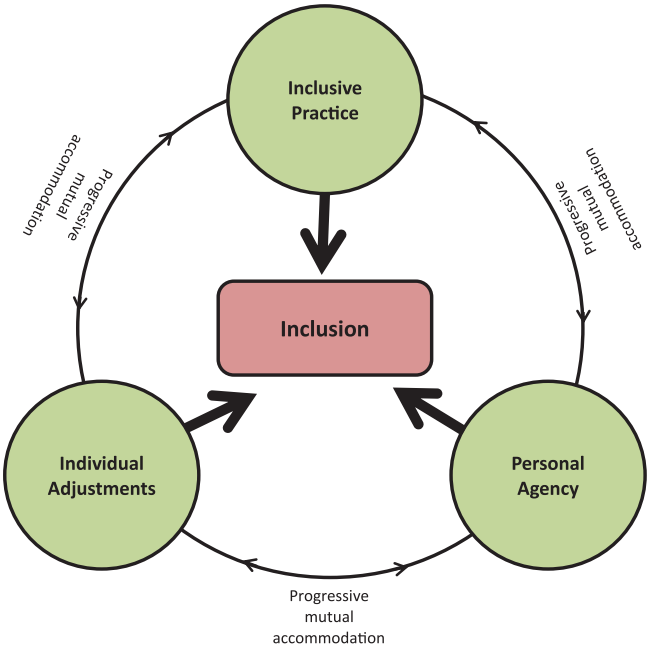

Figure 1. Balancing inclusive design individual adjustments and individual agency for students with disabilities in Higher Education.

Case study of personal agency and progressive mutual accommodations

'Erika' is severely sight impaired and reads using braille and specialist speech software. She studied an Arts-based course requiring large volumes of reading.

In the first year, she faced challenges obtaining accessible reading material. Her institution failed to provide reading lists in sufficient time for the library to source alternative formats of texts, and when they did, the library did not fully understand the adjustments required, leading to further delays. While Erika initially found it challenging, she took initiative and explained to staff the adaptations she required and once she received material in an accessible format, she was able to access it using her assistive technology (a laptop with a screen-reader and a refreshable braille device), which she had been taught to use in school through specialist curriculum input.

Erika was assigned a research assistant who helped her with formatting essays, identifying books in the library and took on a mentoring role to help her develop independent study skills.

In the second year, Erika arranged meetings with all her lecturers to introduce herself and to explain to them what adjustments could be made to include her in lectures and seminars. When asked what had given her the confidence to self-advocate in such a way, she identified drawing upon previous experiences in school and her knowledge of the range of adjustments available. Having learned from the previous year, library staff obtained reading lists in advance of her courses and all reading material was prepared for her in an accessible format in advance. She continued to work with her research assistant and her grades improved as she drew on a wider range of sources for her essays.

In her third year, Erika completed her dissertation. This posed new challenges because she had to identify relevant sources independently and was particularly challenging when she needed to reference physical books rather than electronic journal articles. Ordinarily, the library service would either arrange for an alternative format to be sourced for transcription; however, with many potential texts, this proved impractical. Instead, Erika worked in partnership with her research assistant. She directed the research assistant to particular books using the library catalogue. The research assistant in turn gave a summary of the headings in that book, and when requested read out short segments. Erika then made the decision of whether to request for the text to be adapted or not. While this process was more time consuming than it would have been for her sighted peers, Erika was able to make independent decisions. This was possible through collaborative working between Erika and multiple members of staff at the institution; a process which was developed and refined throughout the duration of her course.

It is also important to consider the tensions which may exist through the interactions in this framework. For example, there may be cases where either the HEI fails to provide an

inclusive learning environment or the student arrives without the necessary skills to benefit from inclusive practice. This will result in both HEI and student relying heavily on individual adjustments to enable the student to succeed. It is therefore important for HEIs to fulfil their obligation to provide inclusive learning environments *and* have strategies for nurturing the development of these skills once the student transitions into HE. This is particularly true for students who may have experienced sight loss later in their educational career and therefore may not have benefited from being taught areas of the ECC during school. It is also possible for an HEI to 'over-support' a student by having limited expectations of them as an independent learner. As an example, one participant described her reluctance towards conducting online literature searches for her assignments as she was not very confident in using assistive technology to access the internet. Rather, she relied heavily on a research assistant (funded by the HEI) to identify relevant papers. Instead of working in partnership with them, the student passed all responsibility to their assistant. As well as restricting her in becoming an independent learner, this posed potential challenges for the student in her transition to a Master's degree at a different institution and the development of workplace skills. Ideally, throughout the duration of her studies, she would have continued to develop her assistive technology skills, leaving her better prepared to make these next transitions.

Conclusion

The UK Department for Education (HM Government 2017) provides broad guidance to HEIs of ways in which inclusive practice can be implemented, many of which mirror strategies identified in this paper. This guidance is important because it rightly places responsibility upon the HEI for providing social structures which are inclusive of all students. We would note, however, its failure to acknowledge the role of the individual learner in working in partnership with the HEI to ensure the practice is inclusive. The framework outlined in this paper centres around the interactions between the institution and learner, and to this extent, we argue it offers a more complete analysis. In examining the findings through the lens of a bioecological model of inclusive HE, we argue that HEIs may find an appropriate balance between improving learning experiences of students with VI in HE through developing and promoting inclusive practice, by making individual adjustments for specific individual needs and by recognising the significance of the personal agency of the individual. The framework emphasises the significance of acknowledging the progressive and mutual accommodation between the learner and the HE environment, and the importance of the learner being suitably resourced through their earlier educational experiences to be able to participate in the new setting of HE as an 'agent of change'.

The paper provides three key messages for policy-makers, specialist services supporting students with VI in compulsory education and HE providers. Firstly, it illustrates the importance of students with VI being empowered within education contexts to develop personal agency to ensure that they are equipped with the necessary skills and experiences required to make successful transitions into HE. Secondly, it highlights the necessity of students partnering with HEIs to develop strategies of support in the form of progressive mutual accommodations. Thirdly, it outlines important features of a balanced interactional model of support which can be applied to further develop inclusive practice at HEIs.

This paper is limited in focussing only upon the experiences of students with VI in the UK. Additionally, while the views of some HEI staff have been included through case studies, there is an emphasis towards HE experiences from the student's perspective. While the proposed model has relevance for HEIs supporting students across disability groups and in other countries, further research is recommended to explore these broader contexts to increase understanding of the interactions between the student and the environment in which they are situated.

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Notes on contributors

Rachel Hewett is a Birmingham Fellow based at Vision Impairment Centre for Teaching and Research at School of Education, University of Birmingham, UK.

Graeme Douglas is Head of Department of Disability Inclusion and Special Needs and Co-Director of Vision Impairment Centre for Teaching and Research at School of Education, University of Birmingham, UK.

Michael McLinden is Deputy Head of School of Education and Co-Director of Vision Impairment Centre for Teaching and Research at University of Birmingham, UK.

Sue Keil is a Researcher at Visual Impairment Education Workforce and Honourary Research Fellow at School of Education, University of Birmingham, UK.

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